Gaps Assessment and GHS Implementation Roadmap

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1 Introduction

The implementation of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) in Nigeria represents a critical step towards enhancing the management of chemical hazards, ensuring safety in the use of chemicals, and aligning with international standards. This document builds upon the comprehensive findings from the baseline assessment submitted in August 2023.

The approach in crafting this roadmap draws from extensive capacity-building material and insights from international organisations like UNEP, UNITAR, and ILO, which have been instrumental in supporting GHS implementation globally.

The Gaps Assessment identifies three primary areas of focus in Nigeria: the development of a clear regulatory framework for classification and labelling of chemical products, sustainable financing for institutional capacity in chemicals control, and enhancing the capability to implement and enforce GHS requirements. This assessment reflects a thorough analysis of the current landscape, highlighting the key challenges and opportunities that lie ahead in Nigeria's journey towards effective chemical management.

The National Implementation Roadmap, outlined in this document, is structured around seven key elements: preparatory steps, establishing a GHS-based regulatory framework, capacity building and training, raising awareness, enforcement and compliance, international collaboration, and monitoring, evaluation, and reporting. Each element is detailed with action plans, resource requirements[1], and timelines, providing a strategic and structured approach towards achieving GHS compliance.

As Nigeria embarks on this critical path, the roadmap serves as a guide to navigate the complexities of chemical management, align with international standards, and ultimately protect human health and the environment from the potential hazards of chemicals. The successful implementation of the GHS in Nigeria will not only contribute to national safety and environmental sustainability but also reinforce Nigeria's commitment to global chemical safety standards.

[1] Estimates of human resources are provided in workdays, for less resource-intensive actions, or Full-Time Equivalent (FTE), for resource-intensive actions. One FTE is equal to 220 workdays of an employee working full time per year. Human resources estimates are based on expert judgement, i.e. considering past experiences in different countries. The actual required resources may vary significantly and depend on a number of factors, such as efficiency of each organisation involved and level of complexity of the action.

2 Gaps assessment

Figure 2-1 shows the gaps identified in Nigeria and the specific objectives to achieve to fully implement and enforce the GHS.

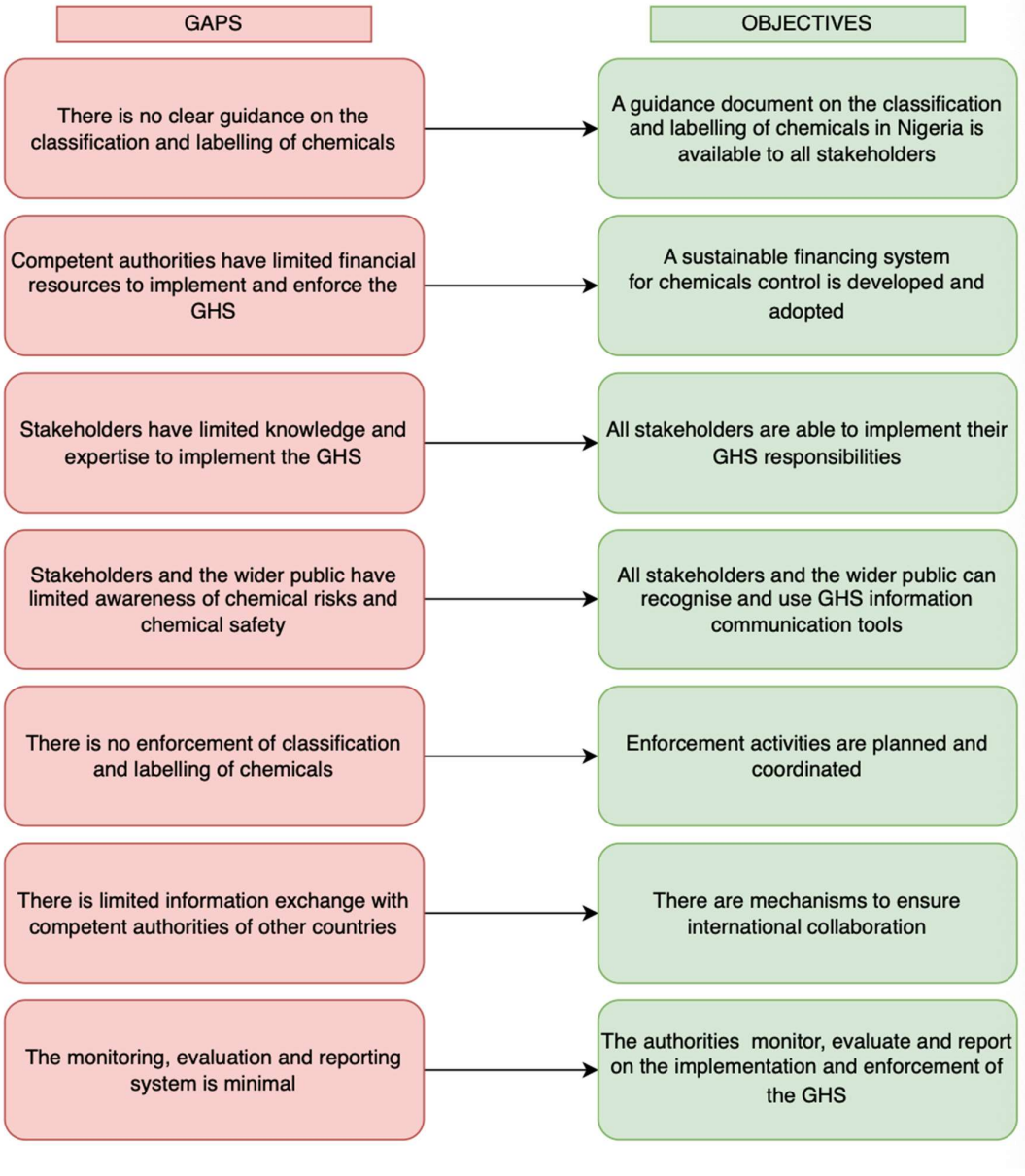


Figure 2-1: Gaps and objectives in Nigeria

The three main gaps in Nigeria relate to the lack of a clear regulatory framework for the classification and labelling of chemical products, the lack of a sustainable financing of institutional capacity for chemicals control, and the limited capacity to implement and enforce the upcoming requirements on the classification and labelling of chemical products. This section summarises the key findings of the baseline analysis, which have informed the development of the action roadmap.

2.1 Legislative framework

The two key pieces of legislation currently in force are the **National Environmental (Hazardous Chemicals and Pesticides) Regulations 2014 (S.I. No. 65 of 2014)** and the **National Environmental (Chemical, Pharmaceutical, Soap and Detergent Manufacturing Industries) Regulations 2009.** The National Environmental (Hazardous Chemicals and Pesticides) Regulations 2014 already partially implemented the GHS, requiring importers and exporters (but not manufacturers of chemical products for the domestic market) to label chemicals and pesticides according to the GHS and to provide safety data sheets (SDS) in line with the GHS. The Regulations have no requirements on classification. The National Environmental (Chemical, Pharmaceutical, Soap and Detergent Manufacturing Industries) Regulations 2009 have a wide scope and, among other things, require every facility to submit a list of chemicals used in the manufacture of its products and their SDS.

Nigeria acceded the Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) on 18 Oct 2018,[2] which therefore entered into force on 19 November 2018, binding Nigeria to legally implement the Agreement.[3] Nigeria also adheres to the Convention on International Civil Aviation and has adopted the International Maritime Dangerous Goods Code and ratified the International Convention for the Safety of Life at Sea (SOLAS).

The **Pesticides Registration Regulation of 2021** regulates the manufacture, import, export, distribution, commercialisation, and use of pesticides in Nigeria. The Regulation requires all pesticides to have labels approved by the National Agency for Food and Drug Administration and Control (NAFDAC) and be 'in accordance with the Agency's Labelling requirement', effectively opening up the opportunity to implement the GHS.

The competent authorities have drafted the '**Chemical and Chemical Products Regulations, 2020'**, which requires manufacturers, importers, and downstream users to classify, label and package chemical products adequately. The labelling requirements refer to the GHS.

The regulatory framework is therefore fragmented, with multiple pieces of legislation with overlapping classification and labelling requirements.

2.2 Sustainable financing of institutional capacity

Having a sustainable financing framework for institutional capacity in the context of chemicals management is crucial for several reasons:

- Effective implementation of legislation: A sustainable financing framework ensures that institutions responsible for implementing chemicals legislation have the necessary resources to carry out their functions effectively. This includes activities related to monitoring, enforcement, and compliance.
- Human resources development: Financial support allows for the training and development of human resources within institutions. This is essential for building the expertise needed to manage complex chemical-related issues, including risk assessment, regulation, and emergency response.
- Infrastructure and technology: Sustainable funding enables the establishment and maintenance of necessary infrastructure and technological systems. This may include

[2] https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XI-B-14&chapter=11&clang=_en

[3] UNECE (2022). Road Map for Accession to and Implementation of the Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). United Nations publication issued by the United Nations economic Commission for Europe.

laboratories, monitoring equipment, and information systems critical for data collection and analysis.

- Timely response to emergencies: Adequate funding ensures that institutions can respond promptly to chemical emergencies. This includes having the necessary personnel, equipment, and procedures in place to address incidents like spills, accidents, or other hazardous situations.
- Data collection and analysis: Financial support allows institutions to collect, analyse, and manage data related to chemical use, exposure, and risks. This information is vital for informed decision-making and the development of evidence-based policies.
- Capacity for regulatory oversight: Sustainable financing provides the capacity for regulatory bodies to oversee the industry effectively. This involves conducting inspections, audits, and ensuring that companies comply with regulations, permits, and licensing requirements.
- Public awareness and stakeholder engagement: Funding is essential for public awareness campaigns and stakeholder engagement programmes. This helps in educating the public about the risks associated with certain chemicals, promoting responsible chemical use, and involving stakeholders in decision-making processes.
- Research and Development: Financial resources support research and development activities aimed at identifying safer alternatives, assessing the environmental and health impacts of chemicals, and advancing scientific understanding in the field.
- Long-Term planning and stability: Sustainable financing provides stability for institutions engaged in chemicals management. Long-term planning becomes feasible, ensuring that the institutional capacity is maintained over time.
- Compliance with international agreements: Adequate financing is necessary to meet obligations under international agreements, including reporting requirements and participation in collaborative initiatives.
- Incentives for industry compliance: Sustainable funding can be used to establish incentive programmes that encourage industry compliance with environmental and safety standards. This fosters a cooperative approach between regulatory bodies and the private sector.

In summary, a sustainable financing framework for institutional capacity is a cornerstone for building a robust and effective chemicals management system. It ensures that the necessary resources are available to address the complexities of regulating and managing chemicals in a way that protects human health and the environment.

The relevant Ministries, Departments and Agencies receive funding from the Federal Government Budgetary Allocations. The salaries of NESREA and NAFDAC staff are paid by the Federal Government while the agencies running cost are funded through their internally generated revenues (fees collection). Some resources are received from the Federal Government Budgets, and some funding is also received through grants from external donors (e.g. UNEP). NAFDAC remits 35% of the collected fees to the federal government.

With the entry into force of the Chemical and Chemical Products Regulations, 2020, the competent authorities will have to revise and update the funding system to ensure covering all expenses due to new obligations.

2.3 Implementation and enforcement capacity

The National Committee on Chemicals Management (NCCM) is operational and has the mandate to operate as GHS Implementation Committee. The NCCM meets twice a year, and the 23 members are from the following institutions:

1) Federal Ministry of Environment

2) Federal Ministry of Health
3) Federal Ministry of Agriculture and Food Security
4) Federal Ministry of Labour and Employment
5) Federal Ministry of Industry, Trade and Investment
6) Federal Ministry of Transportation
7) Federal Ministry of Science, Technology and Innovation
8) Federal Ministry of Petroleum Resources
9) National Environmental Standards and Regulations Enforcement Agency (NESREA)
10) National Agency for Food and Drug Administration and Control (NAFDAC)
11) Nigeria Customs Service (NCS)
12) Federal Competition and Consumer Protection Commission (FCCPC)
13) Standards Organization of Nigeria (SON)
14) National Oil Spill Detection and Response Agency (NOSDRA)
15) National Authority on Chemical and Biological Weapons Convention
16) Nigeria Quarantine Services (NAQS)
17) Office of the National Security Adviser
18) Manufacturers Association of Nigeria (MAN)
19) Institute of Chartered Chemists of Nigeria
20) A representative of the academia to be appointed by the Minister on rotational basis from the six geo-political zones
21) A representative of Non-Governmental Organizations involved in environmental advocacy relating to safe chemical and waste management who shall be appointed by the Minister on rotational basis
22) A representative of the Oil Exploration Companies operating in Nigeria
23) Waste Management Society of Nigeria (WAMASON)

The Project Steering Committee is composed of the following members:

- Federal Ministry of Environment (Chair)
- Federal Ministry of Health and Social Welfare
- Federal Ministry of Agriculture & Food Security
- Federal Ministry of Justice
- Federal Ministry of Labour & Employment
- Federal Ministry of Industry, Trade & Investment
- Federal Ministry of Transportation
- National Agency for Food & Drug Administration & Control
- National Environmental Standards Regulations & Enforcement Agency
- Standards Organization of Nigeria
- Basel Convention Coordinating Centre (Academia)
- Manufacturers Association of Nigeria (Industry)

2.3.1 Public authorities

NESREA has around 76 employees (2 per state) dealing with chemicals. NAFDAC has around 595 staff dealing with chemical issues. A few representatives of National Agency for Food and Drug Administration and Control (NAFDAC) took part in a paid online course on GHS which was used as a 'train the trainer' opportunity and they subsequently trained additional NAFDAC staff. The course was also attended by representatives of the Federal Ministry of Environment. Employees of the Federal Ministry of Environment have also received training on other environmental issues from UNITAR. A comprehensive list of national competent authorities is provided in Table 4-1 of the country specific baseline report (Work Package 1).

2.3.2 Business and industry

Multinational chemical companies operating in Nigeria use chemical hazard communication tools compatible with GHS provisions, including safety data sheets and labels. These are likely to be used throughout their supply chains. However, workers of companies acquiring and providing goods and services[4] to and from these companies in Nigeria — in other words, Nigerian upstream and downstream businesses not part of these large chemical business groups — may not be trained to understand the SDSs and labels and act accordingly. Manufacturers and importers of chemical products within the country may be familiar with GHS hazard communication tools but may not implement them systematically.

The combined efforts of public authorities and industry associations is needed to raise awareness and support capacity building in industry stakeholders. There are a number of business associations that can contribute towards this goal. These are:

- Manufacturers Association of Nigeria (MAN)
- Nigeria Gas Association (NGA)
- Nigerian Association of Petroleum Explorationists (NAPE)
- CropLife Nigeria

2.3.3 Civil society

There is little collaboration between regulatory bodies and civil society organisations. A number of NGOs, such as the Nigerian Environment Society, Friend of the Environment Nigeria, the Sustainable Research and Action for Environmental Development and the Action Alliance on Pesticides in Nigeria, could play important roles for raising awareness on chemical safety.

Another important player could be the Institute of Chartered Chemists of Nigeria (ICCON), which is a professional regulatory body offering training and certification. ICCON carries out sensitisation and public awareness programmes on GHS in collaboration with chemical industries, chemical dealers, and schools. The Institute, as part of its mandate, trains its members through the Mandatory Continuing Professional Development programme and other capacity building programmes on sound chemical management, chemical safety and security, and safe handling and use of chemicals.

[4] Including transport services and logistics.

3 GHS National Implementation Roadmap

3.1 Overview

Implementing the GHS involves a series of steps and actions to ensure compliance with international standards and the safety of workers, consumers, and the environment. The proposed national roadmap is structured as follows:

1) **Preparatory steps.** Organise a workshop to launch the roadmap and obtain the support of senior representatives from the public and private sectors.
2) **GHS-based regulatory framework and implementing activities.** Develop a guidance document clarifying the scope of the laws on the classification and labelling of chemical products, specifying classification criteria, pictograms, and other GHS elements. Establish a technical committee to keep the legislation up-to-date and ensure coherence of other legislative acts.
3) **Capacity Building and Training**. Identify and train representatives of relevant ministries and government agencies, industry, and other stakeholders on the GHS principles and requirements.
4) **Raise awareness**. Implement a comprehensive hazard communication programme to educate workers, consumers, and emergency responders about the new labelling and safety data sheet requirements. Engage with industry, trade associations, labour unions, and civil society to raise awareness about GHS and gather feedback for continuous improvement.
5) **Enforcement and compliance**. Develop an enforcement framework to monitor and ensure compliance with GHS requirements.
6) **International collaboration.** Collaborate with neighbouring African nations and other partners to ensure regional harmonisation and facilitate cross-border trade.
7) **Monitoring and reporting.** Provide reports and updates to international organisations to demonstrate Nigeria's commitment to GHS compliance.

This roadmap serves as a guideline for implementing the GHS in Nigeria. The process will require close collaboration between ministries, industry stakeholders, and the public to ensure successful adoption and continuous improvement of chemical safety standards.

3.2 Key element 1: preparatory steps

3.2.1 Action 1.1: Organise a national GHS workshop

The national GHS workshop was held on 22 May 2024 in Abuja. The workshop brought together representatives from government ministries, agencies, and departments, as well as industry, civil society, agriculture, labor, and academia. Stakeholders discussed and reviewed the gaps assessment and the GHS implementation roadmap, providing comments and suggestions for their improvement. The "Report of the stakeholders' review of the gaps assessment and GHS implementation roadmap: 'increasing the global implementation of Globally Harmonised System of classification and labelling of chemicals (GHS) through a pilot focusing on Africa' project in Nigeria" was produced by the Federal Ministry of Environment and should be regarded as complementary to this document.

3.3 Key element 2: GHS-based regulatory framework and implementing activities

3.3.1 Action 2.1: Decide on the legislative option to set the regulatory framework and ensure GHS implementation

It is recommended that the NCCM decides on the legislative option for the regulatory framework to implement and enforce the GHS. The Chemical and Chemical Products Regulations, 2020 have the clear requirement for all 'chemical manufacturers, importers or downstream users of substances or mixtures to classify, label and package their hazardous chemicals appropriately before placing them on the market'. However, not many more details are provided, if not for a reference to the GHS. UNITAR will implement a workshop presenting the legislative options available to Nigeria with the objective to facilitate an informed decision by the NCCM. The competent authorities could decide on developing a single piece of legislation specific to the classification and labelling of chemical products, implementing different elements and building blocks of the GHS in different sectorial legislation, setting standards, developing a guidance document or a combination of these options. The competent authorities should verify whether the legislation in force include all key elements of a functioning framework for the classification and labelling of chemical products, which are:

- Objectives, i.e. the reasons for implementing and enforcing GHS requirements: protection of human health and the environment, facilitation of the trade of chemical products);
- Scope: what chemical products are covered and which ones are excluded (i.e. pharmaceutical products, cosmetic products, food and feed additives, pesticides residues in food at the point of intentional intake);
- Definitions: chemical substance, chemical mixtures, etc.
- Duty-holders: who should classify and label chemical products (i.e. manufacturers and importers)
- Role of the competent authorities: enforcement;
- Rules: how to classify and label chemical products (classification criteria, label and pictograms, Safety Data Sheets, etc.);
- Fines and sanctions in case of non-compliance.

With regard to the rules (how to classify and label chemical products according to the GHS), competent authorities could provide support in the form of a guidance document. This could further elaborate on the following elements:

- **Define scope**: There are a number of pieces of legislation all referring to the (classification) and labelling of chemical products. While their scopes would be better defined in each piece of legislation, a guidance document could contribute to clarifying the scopes, providing unambiguous definitions, and specifying which chemical products are outside the scope (e.g. medicinal products, veterinary medicinal products, cosmetic products, food, and feed stuffs).
- **Classification criteria and labelling elements**: provide the list of hazard classes, categories and codes, hazard statements, precautionary statements, signal words, symbols, pictograms and all other GHS label elements.
- **Safety Data Sheets:** Clarify the minimum information to be provided under each of the 16 headings.
- **Storage and transportation requirements**: Include standard protocols for storage and transportation, including proper signage, records of transport, specific safety equipment and vehicles.
- **Packaging**: Clarify the characteristics of packaging for certain chemical products.

- **Advertising**: Clarify advertising rules, and who has the remit for their enforcement.
- **Training**: Present best practices regarding regular training of employers and employees.
- **Offences and penalties**: Explain criminal and administrative offences and penalties for non-compliance with the legislation.
- **Inspections and enforcement**: Identify the authorities responsible for inspections, specifying their obligations and powers.
- **Appeals**: Explain the procedures for appeals against sanctions and negative administrative decisions.
- **Miscellaneous provisions**: Address issues that do not fit into other categories but are important for the legislation, such as the interplay with other legislative requirements (such as the registration of chemical products).

Once the decision on the legislative option is taken, the Project Steering Committee (see Section 2.3) should start working on the document (whether this is a single piece of legislation, multiple pieces of legislation to be updated, a standard or a guidance). It is recommended that the draft document is shared by the core team periodically with the NCCM and the Project Steering Board for comments and suggestions. This would also enable the monitoring of the action progress.

3.3.2 Action 2.2: Consider the proposition of substances with harmonised classification and labelling

To ensure an adequate risk management, the Federal Ministry of Environment, the Federal Ministry of Health, NESREA, and NAFDAC should consider proposing harmonised classification and labelling (CLH) for substances with hazards of the highest concern (carcinogenicity, mutagenicity, reproductive toxicity and respiratory sensitisers, active substances of biocidal and plant protection products). The NCCM will have to decide how often to propose CLH substances and how to publish the list, e.g. in the guidance document[5]. It is suggested that the NCCM consult the European Chemicals Agency (ECHA) on how to implement the process. Moreover, the NCCM could screen the list of CLH substances in the European Union, identify those that are also used in Nigeria, and propose the same CLH.

3.3.3 Action 2.3: Apply to become observers in the United Nations Sub-Committee of Experts on the GHS, and the United Nations Subcommittee of Experts on the Transport of Dangerous Goods

The GHS is in constant evolution and is *updated, revised and improved every two years as needs arise and experience is gained in its implementation*.[6] The two groups tasked with the maintenance, updating and promotion of the GHS are the United Nations Sub-Committee of Experts on the GHS (UNSCEGHS), and the United Nations Subcommittee of Experts on the Transport of Dangerous Goods (UNSCETDG). Countries may apply to become observers or full members. For the latter, countries need to commit to participate on a regular basis.

It is recommended that Nigeria applies to become an observer in both groups. The Federal Ministry of Environment could be tasked with this responsibility. Its participation in the two groups would ensure that NCCM is able to keep legislation and guidance documents up to date.

[5] As, for example, Part 1 of the Industry Code of Practice on chemicals classification and hazard communication in Malaysia.

[6] https://unece.org/about-ghs

3.3.4 Action 2.4: Establish a sustainable financing system for chemicals control

It is recommended that the NCCM carries out an analysis of the costs of the infrastructures necessary to ensure the functioning of the chemicals' control system.

It is advisable to estimate the costs of the whole national chemicals' management system and decide on the allocation to different activities (including GHS-related activities) on an annual or biannual basis. The main elements of a chemicals' management system are:

- Identification and assessment of chemicals' hazardous properties and risks.
- Dissemination of hazard, risk and safety information.
- Making informed choices about chemicals to be placed on the market.
- Organisation of workers and public safety.
- Compliance monitoring.[7]

The costs related to the implementation and enforcement of the GHS-based legislation are:

- Costs related to the functioning of the GHS Implementation Committee (in this case the NCCM) and any future sub-committee.
- Costs of developing and updating the legislation, standards and guidance documents.
- Costs of gathering hazard classifications of chemical products.
- Costs of proposing harmonised classification and labelling for certain chemical products.
- Costs of inspections and verification of the adequacy of hazard classifications and labelling of chemical products on the market.
- Costs of communication activities (workshops, leaflets, maintenance of webpages, helpdesks, etc.).

The analysis of the costs needs to be matched by an analysis of the possible funding sources. In general, these can be:

- Allocations from the Federal Government Budgets
- Internally generated revenues
- External funding

To estimate the internally generated revenues, the competent authorities need the following information: number of duty-holders that will have to classify and label chemical products (and notify this information if required by the legislation) and number of chemical products placed on the market. The National Environmental (Chemical, Pharmaceutical, Soap and Detergent Manufacturing Industries) Regulations 2009 require facilities to submit a list of chemicals used in the manufacture of their products. Although not fully enforced, some information may be available to the authorities. This could be used as a starting point and complemented through the collaboration with industry stakeholders, to arrive to an estimate. The NCCM will then be able to define the value of the fee per service provided.

External funding (such as the Global Environmental Facility grants, the UN special Programme development projects, and other types of funding provided by countries offering bilateral support)

[7] UNEP 2015. UNEP guidance on the development of legal and institutional infrastructures and measures for recovering costs of national administration for sound management of chemicals. Table 1 at page 20 lists the key activities for each main element of the management system.

can be used in the short term to support the development of the guidance document and build capacity but should not be relied upon in the long term.[8]

The NCCM should also reconsider over time the fee values, not just in terms of cost coverage, but also in terms of their effect on compliance and general response of the companies. For example, the Committee may like to consider remodulating the fees according to the size of the companies, quantities of chemicals traded, etc.

Table 3-1 summarises action owners, required resources and time targets for the actions in this roadmap key element.

Table 3-1: GHS key element 2: GHS-based regulatory framework and implementing activities										
Action		**Action owner and support**						**Required resources**		
2.1 Decide on the legislative option to set the regulatory framework and ensure GHS implementation		The NCCM, with the lead of the Federal Ministry of Environment, the Federal Ministry of Health, NESREA and NAFDAC, and the support of the Project Steering Board.						2 Full-Time Equivalents (6 people x 0.16 FTE x 2 years)		
2.2 Consider the proposition of substances with harmonised classification and labelling		The NCCM, with the lead of the Federal Ministry of Environment, the Federal Ministry of Health, NESREA and NAFDAC, and the support of the Project Steering Board.						0.25 FTE per year		
2.3 Apply to become observers in the United Nations Sub-Committee of Experts on the GHS, and the United Nations Subcommittee of Experts on the Transport of Dangerous Goods		The GHS Implementation Committee.						-		
2.4 Establish a sustainable financing system for chemicals control		The NCCM, led by the Federal Ministry of Environment, the Federal Ministry of Health, NESREA and NAFDAC in collaboration with the Federal Ministry of Finance, Budget and National Planning. The Project Steering Group and some of its members (e.g. ECHA) can also provide advice.						-		
Target	**2024 Q1**	**2024 Q2**	**2024 Q3**	**2024 Q4**	**2025 Q1**	**2025 Q2**	**2025 Q3**	**2025 Q4**	**2026 Q1**	**2026 Q2**
Action 2.1								X		
Action 2.2								X		
Action 2.3								X		
Action 2.4								X		

3.4 Key element 3: Capacity Building and Training

3.4.1 Action 3.1: Define training needs and identify representatives to undertake training

It is recommended that the NCCM define the training needs of each organisation member of the Committee and identify two representatives per organisation to be trained. The training of two people

[8] Strategic Approach to International Chemicals Management (SAICM), & United Nations Environment Programme (2022). *Study on Industry Involvement in the Integrated Approach to Financing the Sound Management of Chemicals and Waste - April 2022*. https://wedocs.unep.org/20.500.11822/40069.

per organisation should ensure that the knowledge and skills built through training are not lost because of staff turnover[9]. Given the limited resources available and the need for training a wide cohort of people, it is recommended to follow a 'train-the-trainers' model. This implies that the people selected to undertake the training in each organisation should be confident and skilled public speakers / communicators as a minimum and should undertake to train further colleagues in their units or stakeholder groups.

UNITAR provides a GHS e-learning course of 10 weeks which runs twice a year, starting every March /April and September/October. This is a comprehensive course encompassing all technical elements of the GHS. Some representatives of NAFDAC have taken part in this course, and have subsequently trained other NAFDAC staff. Some representatives of the Federal Ministry of Environment have also undertaken the course. It is recommended that additional representatives of the NAFDAC and NESREA undertake this course. This training would also be very useful for all industry representatives responsible for the classification and labelling of chemical products, and for consultancies interested in providing these services.

Not all stakeholders require training on all technical elements. **Error! Reference source not found.** lists webinars and training materials available at UNITAR (highlighted in green) and ideas for tailor-made GHS courses that could be developed and implemented. The latter could also be developed and offered by ICCA/Cefic, ECHA and other international partners. It also provides suggestions on the target audience and indicative time of implementation. The NCCM should consider the priorities and propose trainees and discuss implementation times with the Project Steering Board.

Table 3-2: Indicative list of training courses with suggested participants and time of implementation

Trainings	Suggested stakeholders	Suggested implementation time
UNITAR GHS e-learning course https://event.unitar.org/full-catalog/classifying-and-labelling-chemicals-according-un-ghs-18-september-1-december-2023	NAFDAC and NESREA	Q2 2024
Legislation of chemicals placed on the market https://event.unitar.org/full-catalog/legislation-chemicals-placed-market-course	All competent authorities and members of the NCCM	Q2 2024
Risk Reduction of Chemicals https://event.unitar.org/full-catalog/risk-reduction-chemicals-course	All competent authorities and members of the NCCM	Q2 2024
Enforcement of chemicals legislation https://event.unitar.org/full-catalog/enforcement-chemicals-legislation-course	NAFDAC and NESREA	Q3-Q4 2024
Sustainable Financing of Institutional Capacity for Chemicals Control https://event.unitar.org/full-catalog/sustainable-financing-institutional-capacity-chemicals-control-course	All competent authorities and members of the NCCM	Q2 2024

[9] People retiring or moving to other positions or organisations.

Table 3-2: Indicative list of training courses with suggested participants and time of implementation		
Trainings	**Suggested stakeholders**	**Suggested implementation time**
Training on emergency response and sources of emergency response information	Poison centres, emergency responders	Q3-Q4 2024
Developing, reading and interpreting Safety Data Sheets	All stakeholders, including poison centres and emergency responders.	Q3-Q4 2024
Understanding labels	All stakeholders, including poison centres and emergency responders.	Q3-Q4 2024
Training on stakeholder engagement	Federal Ministry of the Environment	Q1-Q2 2025

The list of representatives selected to undertake the training should be ready by the start of the first quarter of 2024. UNITAR could support the GHS Implementation Committee by holding a call to explain the content, modules, prior knowledge /skills required, and duration of each course.

3.4.2 Action 3.2: Undertake UNITAR training courses

All selected representatives undertake UNITAR training courses. It is suggested that the NESREA and NAFDAC use the five scholarships available on the UNITAR GHS e-learning course starting in February/March 2024 or in September 2024. All NCCM members should undertake the three courses available online upon registration on legislation of chemicals placed on the market, risk reduction of chemicals, and sustainable financing of institutional capacity for chemicals control. These take 45 minutes each and provide the bases for the Committee to discuss and develop the national framework, including the guidance on classification and labelling of chemical products. NESREA and NAFDAC should also undertake the online course on the enforcement of chemicals legislation. Importantly, participants should be committed to attend UNITAR training until the end. Drop-off from the training courses should be monitored, reported to the Project Steering Board and the underlying issues discussed.

3.4.3 Action 3.3: The 'trained trainers' deliver the training in their organisations

The representatives who have finalised the UNITAR GHS e-learning course should train their colleagues as soon as their own training is complete, so that the knowledge and skills acquired are still 'fresh' and the risk of losing skilled resources through staff turnover is minimised. The participants to the UNITAR GHS e-learning course receive a pdf document at the end. While this document is not in an adequate format to be used for training, it can be used to develop training material. Moreover, UNITAR will develop further training material which will be accessible for free.

The training courses implemented by the trained personnel should be evaluated by the participants through satisfaction surveys. Moreover, the participants could complete UNITAR final exams, which could help to establish whether the courses have achieved the expected results.

3.4.4 Action 3.4: Deliver training through chemicals' supply chains

Beyond UNITAR, other members of the Project Steering Board, in particular ECHA, the Commission and ICCA/Cefic can provide training and capacity building. This could take the form of site visits (in Finland and Belgium) by the Nigerian authorities, or series of webinars on specific topics. Key ministries, NESREA and NAFDAC would greatly benefit from the expertise of these institutions' experts.

Topic that could be discussed are the functioning of the CLP Regulation (Classification and Labelling Inventory, harmonised classification and labelling, new hazard classes added to the EU system, poison centres, Enforcement Forum) (with ECHA), and the synergies between CLP and other legislation (with the Commission). ICCA/Cefic and its members could describe best industry practices from the classification and labelling of chemical products. Moreover, EU Member State enforcement authorities could also offer to describe their enforcement processes and practices, recurrent issues and ways forward.

It is recommended that large international chemical manufacturers and distributors which operate in Nigeria (e.g. BASF West Africa, DOW) provides training on the GHS (e.g. developing, reading, and interpreting Safety Data Sheets, understanding labels) to their local suppliers and clients. The training could be organised by ICCA and Cefic in collaboration with the local business associations (CropLife Nigeria and the Manufacturers Associations of Nigeria).

Table 3-3 summarises action owners, required resources and time targets for the actions in this roadmap key element.

Table 3-3: GHS key element 3: Capacity building and training

Action	Action owner and support	Required resources
3.1 Define training needs and identify representatives to undertake training	The NCCM, with the support of UNITAR	10 working days
3.2 Undertake UNITAR training courses	Individuals selected to undertake the trainings	Five scholarships available. Additional €20,000 could be dedicated to train additional workforce.
3.3 The 'trained trainers' deliver the training in their organisations	Trained trainers in their own organisations, with the support of UNITAR	2.5 FTEs (0.125 FTE x 20 people) ~€10,000
3.4 Deliver training through chemicals' supply chains	ICCA, Cefic and their members, with the support of CropLife Nigeria and MAN	-

Target	**2024 Q1**	**2024 Q2**	**2024 Q3**	**2024 Q4**	**2025 Q1**	**2025 Q2**	**2025 Q3**	**2025 Q4**	**2026 Q1**	**2026 Q2**
Action 3.1	X									
Action 3.2										
Action 3.3										
Action 3.4										

3.5 Key element 4: raise awareness

3.5.1 Action 4.1: Develop and implement a communication strategy

Following the training of representatives from the Federal Ministry of Environment and other NCCM members, these should work on a communication strategy.

The strategy should aim to increase awareness of the GHS across stakeholders and the wider population but should also include communication about the working procedures of the authorities and the procedures to manage confidential business information. This would ensure transparency and provide trustworthiness of the authorities. The perception and understanding of industry stakeholders of the efficiency of the competent authorities is an important step towards ensuring regulatory

compliance. The authorities should inform industry stakeholders about their upcoming responsibilities and duties with regard to classification and labelling.

The communication strategy could cover the following elements:

- Organisation of **workshops and events**, including identification and selection of topics of interest for Nigerian stakeholders that could be discussed during the events;
- Communication of information on upcoming industry responsibilities and duties; and
- The organisation dissemination of **information online**: the content on NESREA and NAFDAC website, including the webpage of the GHS Helpdesk, could be organised by topics to facilitate access to documents and deadlines. The Helpdesk's webpage could have a Frequently Asked Questions (FAQ) section, which could assist companies and the public.

The development of a communication strategy can be broken down in six steps:

- Definition of strategy's goals and target audiences.
- Survey of the needs and topics of interest and definitions of the communication objectives.
- Identification of the communication channels.
- Allocation of resources for a multiannual plan.
- Definition of evaluation measurements (e.g. number of participants to communication events).
- Implementation of the communication strategy.

Table 3-4 summarises action owners, required resources and time targets for the actions in this roadmap key element.

Table 3-4: GHS key element 4: raise awareness

Action	**Action owner and support**							**Required resources**		
4.1 Develop and implement a communication strategy	The NCCM, with support from the Project Steering Board.							~€20,000		
Target	**2024 Q1**	**2024 Q2**	**2024 Q3**	**2024 Q4**	**2025 Q1**	**2025 Q2**	**2025 Q3**	**2025 Q4**	**2026 Q1**	**2026 Q2**
Action 4.1										

3.6 Key element 5: Enforcement and compliance

3.6.1 Action 5.1: Develop an enforcement strategy

It is recommended that the NCCM develops an enforcement strategy. A comprehensive inspection system is an essential component of the legislative framework and has the objective to ascertain whether duty-holders have the skills and processes in place to ensure the correct communication of hazard information to all actors in their supply chains. Enforcement of the chemical management legislative framework in Nigeria is the primary responsibility of NESREA and NAFDAC, with support from the Nigeria Customs Service (NCS). The police may also support when required (serious breaches of the laws resulting in criminal charges, or checking transport documents). The strategy should cover all intervention points: primary supply (manufacturers and importers), transport and storage (logistics and transport service suppliers), the point of sales (distributors and retailers), and the point of uses (industrial and professional users of chemical products), and set targets (number of inspections in different sectors per year). The strategy should also ensure the coverage of large, medium and small

enterprises. Importantly, the strategy should ensure the coordination of enforcement authorities, avoiding that the same entity is inspected by more than one enforcement authority on classification and labelling requirements.

The Enforcement Forum hosted by ECHA has developed a number of documents and coordinated various enforcement projects over the last 15 years. The Forum could hold a workshop/webinar to support the Nigerian enforcement authorities in developing the enforcement strategy.

3.6.2 Action 5.2: Implement the enforcement strategy

The enforcement strategy is also a tool for increasing awareness of all duty-holders with regard to their requirements on classification and labelling of chemical products. In the first phase of the enforcement campaign, the authorities may want to use issue notifications of non-compliance, explaining how the classification and labelling of the chemical products inspected do not conform to the GHS and the steps to align the hazard communication tools. The notifications should be followed up to verify compliance. The authorities may want to follow this 'educational' approach in particular with regard to mixtures, where the capacity of industry stakeholders to classify and label accordingly mixtures needs to be built over time.

In a second phase, the authorities may want to increase the number of 'surprise' site inspections, issue fines and prosecute non-compliances. Whatever phase the enforcement strategy is in, inspections following reported problems should be carried out systematically, and situations where there is a danger for human health or the environment prosecuted.

Table 3-5 summarises action owners, required resources and time targets for the actions in this roadmap key element.

Table 3-5: GHS key element 5: Enforcement and compliance

Action	Action owner and support							Required resources		
5.1 Develop an enforcement strategy	The NCCM, with support from the Enforcement Forum hosted by ECHA							0.5 FTE		
5.2 Implement the enforcement strategy	NESREA, NAFDAC, NCS, police							-		
Target	**2024 Q1**	**2024 Q2**	**2024 Q3**	**2024 Q4**	**2025 Q1**	**2025 Q2**	**2025 Q3**	**2025 Q4**	**2026 Q1**	**2026 Q2**
Action 5.1										
Action 5.2										

3.7 Key element 6: International collaboration

3.7.1 Action 6.1: Exchange information with the other three beneficiaries of the four-year pilot projects

It is recommended that a series of four (in presence) events are organised, during which the chairs of the respective GHS Implementation Committees present on the progress with the action roadmaps. This format would allow the beneficiaries to share the issues and barriers encountered and discuss possible ways forward together with the Project Steering Board. The events should be organised by each beneficiary in turn, with the support of the Project Steering Board.

3.7.2 Action 6.2: Exchange information with regional partners

One of the objectives of the pilot project is to generate a regional 'aspiration' effect encouraging other countries to follow suit in the implementation of the GHS. Collaboration could be facilitated by organising a network of competent authorities in the West Africa region. These could be invited as observers to the event for exchanging information on the progress with the beneficiaries' action roadmaps to be organised in Nigeria. It is recommended that the Project Steering Board facilitates the establishment of the network by approaching The Economic Community of West African States (ECOWAS). Table 3-6 summarises action owners, required resources and time targets for the actions in this roadmap key element.

Table 3-6: GHS key element 5: Enforcement and compliance

Action	Action owner and support							Required resources		
6.1 Exchange information with the other three beneficiaries of the four-year pilot projects	The NCCM, with support from the Project Steering Board							~€5,000		
6.2 Exchange information with regional partners	The Project Steering Board							-		
Target	**2024 Q1**	**2024 Q2**	**2024 Q3**	**2024 Q4**	**2025 Q1**	**2025 Q2**	**2025 Q3**	**2025 Q4**	**2026 Q1**	**2026 Q2**
Action 6.1				X		X		X		X
Action 6.2										

3.8 Key element 7: Monitoring, evaluation and reporting

3.8.1 Action 7.1: Establish a monitoring, evaluation, and reporting system

It is recommended that the GHS Implementation Committee establishes a monitoring, evaluation, and reporting system for the action roadmap and, more in general, the implementation and enforcement of the GHS. Table 3-7 suggests possible indicators to track the progress of each action.

Table 3-7: Action roadmap and monitoring indicators

Action	Suggested indicators
1. Preparatory steps	
1.1 Implement a national GHS workshop	- Preparatory phase (concept and characterisation) completed - Preparatory phase (marketing & communications) completed - Implementation phase (management & logistics) completed - Steering & closing phase (Co-ordination & quality assurance) completed. The GHS workshop is successfully implemented
2. GHS-based regulatory framework and implementing activities	
2.1 Decide on the legislative option to set the regulatory framework and ensure GHS implementation	- Objectives, scope and target audience are established - Definitions are completed - Section on the physical hazards classification criteria is finalised - Section on the health hazards classification criteria is finalised - Section on the environmental hazards classification criteria is finalised - Section on the classification of mixtures is finalised - Section on the development of Safety Data Sheets is finalised

Table 3-7: Action roadmap and monitoring indicators	
Action	**Suggested indicators**
	- Section on the labelling is finalised - Section on transport is finalised
2.2 Consider the proposition of substances with harmonised classification and labelling	- The NCCM screens the list of CLH substances maintained by ECHA and identify substances used in Nigeria - No. of CLH substances proposed by the NESREA - No. of CLH substances proposed by the NAFDAC - No. of CLH substances adopted
2.3 Apply to become observers in the United Nations Sub-Committee of Experts on the GHS, and the United Nations Subcommittee of Experts on the Transport of Dangerous Goods	- The GHS Technical Committee is established
2.4 Establish a sustainable financing system for chemicals control	- Cost analysis is completed - Revenue analysis is completed - An 'optimal' mix of funding sources is established
3. Capacity Building and Training	
3.1 Define training needs and identify representatives to undertake training	- Trainees are identified (per organisation, training course)
3.2 Undertake UNITAR training courses	- Number of people (per organisation) enlisted in UNITAR trainings - Number of people (per organisation) finalising the courses successfully - Number of drop-offs
3.3 The 'trained trainers' deliver the training in their organisations	- Number of training courses offered by Nigerian trainers - Number of people (per stakeholder) enlisted in domestic trainings - Number of people (per stakeholder) finalising the courses successfully - Number of drop-offs
3.4 Deliver training through chemicals' supply chains	- Number of companies participating in trainings
4. Raise awareness	
4.1 Develop and implement a communication strategy	- Communication strategy completed - Resources allocated to GHS-specific communication initiatives - Number of information days organised - Number of participants (including traditional leaders, schools, sector associations, consumer groups) to communication events - Information webpages established - Number of schools including GHS in their curricula - Success level of social media campaigns (through metrics such as: profile impressions, profile reach, followers, audience growth rate, engagement rate, video plays, posting frequency, clicks, shares, likes, website traffic, comments, mentions, etc.)
5. Enforcement and compliance	
5.1 Develop an enforcement strategy	- Enforcement strategy completed
5.2 Implement the enforcement strategy	- Number of inspections per intervention point (manufacturers, importers, transport and logistics providers, distributors, retailers, industrial users, professional users) - Number of non-compliances - Number of follow-up activities (including prosecutions and sanctions)

Table 3-7: Action roadmap and monitoring indicators	
Action	**Suggested indicators**
6. International collaboration	
6.1 Exchange information with the other three beneficiaries of the four-year pilot projects	- Event in Nigeria is successfully organised and implemented - Successful participation of the Nigerian delegation to the other three events
6.2 Exchange information with regional partners	- Regional network is established - "Lessons learnt" workshops are organised
7. Monitoring, evaluation and reporting	
7.1 Establish a monitoring, evaluation and reporting system	- The monitoring, evaluation and reporting system is established - Establish a team to implement monitoring, evaluation and reporting

Table 3-8 summarises action owners, required resources and time targets for the actions in this roadmap key element.

Table 3-8: GHS key element 7: Monitoring, evaluation and reporting										
Action	**Action owner and support**							**Required resources**		
7.1 Establish a monitoring, evaluation and reporting system	The GHS Implementation Committee, with support from the Project Steering Board							0.5 FTE		
Target	**2024 Q1**	**2024 Q2**	**2024 Q3**	**2024 Q4**	**2025 Q1**	**2025 Q2**	**2025 Q3**	**2025 Q4**	**2026 Q1**	**2026 Q2**
Action 7.1		X								

3.9 Conclusions

This document outlines a strategic and comprehensive approach to overcoming existing challenges in chemical hazard management and ensuring safety in chemical usage. Key conclusions:

1. The roadmap identifies the need for a **coherent regulatory framework** for the classification and labelling of chemical products. The legislative landscape is somehow fragmented with overlapping regulations. A guidance document could help clarify requirements and ensure an effective implementation of chemical safety regulations.

2. **Sustainable Financing**: The roadmap underscores the importance of sustainable financing for institutional capacity in chemicals management. This includes ensuring adequate resources for enforcement, compliance, human resources development, infrastructure maintenance, and public awareness. A sustainable financial framework is integral to the long-term success of GHS implementation.

3. **Capacity Building and Training**: A major component of the roadmap is the emphasis on comprehensive training and capacity building. Leveraging resources like UNITAR's e-learning courses and training provided by entities like ECHA, the Commission, and ICCA/Cefic, the roadmap aims to enhance the knowledge base and technical skills of key stakeholders, including NAFDAC and NESREA personnel.

4. **Awareness and Communication Strategy**: The roadmap emphasises the importance of developing and implementing a communication strategy. This strategy is aimed at raising

awareness among various stakeholders, including farmers, industry employers and workers, transport employers and workers, and consumers.

5. **Enforcement and Compliance**: Developing and implementing an enforcement strategy is vital for ensuring compliance with GHS standards. This includes setting up a comprehensive inspection system, monitoring non-compliances, and ensuring effective communication of hazard information across the supply chain.

6. **International Collaboration**: The roadmap recommends international collaboration and information exchange, highlighting the potential establishment of a network of competent authorities in the West Africa region. Such collaboration could be facilitated by entities like ECOWAS.

7. **Monitoring, Evaluation, and Reporting**: Establishing a monitoring, evaluation, and reporting system is proposed to track the progress of the GHS implementation. This system will help in assessing the effectiveness of the implemented actions and in making necessary adjustments.

8. **Timeline and Resource Allocation**: The roadmap includes an indicative resource allocation and set the timeline for the actions. This planning is crucial for ensuring that the necessary resources are available for each step of the GHS implementation process.

In conclusion, the GHS Implementation Roadmap for Nigeria provides a pragmatic approach to advancing chemical safety and management in the country. Its successful execution demands commitment, collaboration, and sustained effort from all stakeholders. This initiative not only contributes to national health and environmental safety but also reinforces Nigeria's position in the global arena as a responsible and compliant participant in chemical management.

Table 3-9 shows the Gantt chart and the suggested allocation of financial resources from the pilot project.

Table 3-9: GHS National Implementation Roadmap – Nigeria												
Actions	**Financial resources required**	**Timeline**										
		2024 Q1	**2024 Q2**	**2024 Q3**	**2024 Q4**	**2025 Q1**	**2025 Q2**	**2025 Q3**	**2025 Q4**	**2026 Q1**	**2026 Q2**
1. Preparatory steps											
1.1 Organise a national GHS workshop		COMPLETED									
2. GHS-based regulatory framework and implementing activities											
2.1 Decide on the legislative option to set the regulatory framework and ensure GHS implementation									X		
2.2 Consider the proposition of substances with harmonised classification and labelling									X		
2.3 Apply to become observers in the United Nations Sub-Committee of Experts on the GHS, and the United Nations Subcommittee of Experts on the Transport of Dangerous Goods									X		
2.4 Establish a sustainable financing system for chemicals control									X		
3. Capacity Building and Training											
3.1 Define training needs and identify representatives to undertake training		X									
3.2 Undertake UNITAR training courses	~€20,000										
3.3 The 'trained trainers' deliver the training in their organisations	~€20,000										
3.4 Deliver training through chemicals' supply chains											
4. Raise awareness											
4.1 Develop and implement a communication strategy	~€30,000										
5. Enforcement and compliance											
5.1 Develop an enforcement strategy											
5.2 Implement the enforcement strategy											
6. International collaboration											
6.1 Exchange information with the other three beneficiaries of the four-year pilot projects					X		X		X		X
6.2 Exchange information with regional partners											
7. Monitoring, evaluation and reporting											
7.1 Establish a monitoring, evaluation and reporting system			X								

4 References

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